## **Supplemental Material: Definitions of Taxa and Characters**

[Supplemental material for the paper *Investigating cultural evolution using phylogenetic analysis: the origins and descent of the Southeast Asian tradition of warp ikat weaving* by Christopher D Buckley.]

1) Definitions of Weaving Taxa

Weaving	Definition	Language(s)	Language	Language
tradition (taxon)			classification (World Atlas of Languages)	classification (Ethnologue)
Tai (Weft Ikat)	Textiles made using weft ikat by Tai Dam, Tai Daeng, Tai Dam, Tai Mai Chau, Tai Waat, Tai Khang and related groups the regions around Muang Phan and Xam Nuea (borders of Laos and Northern Vietnam). These weavings seem to be a transposition of older warp ikat traditions with relatively little Indian influence (outgroup).	Tai Dam Tai Daeng and related dialects	Tai-Kadai	Tai-Kadai, Kam- Tai
Hainan Meifu Li	Warp ikat tubeskirts made by the Meifu Li subgroup of the Li people of Hainan Island, politically part of China.	Hlai	Tai-Kadai	Tai-Kadai
Sumatra Lampung	Tapis inuh (tubeskirts) from Liwa region at the southern tip of Sumatra, made with warp ikat bands interspersed with embroidery, single-color type)	Lampung	Lampungic	MP
Philippines Mindanao	Warp ikat textiles, mainly tubeskirts and ceremonial hangings, made by T'boli, Kulaman, Bagobo, B'laan and Mandaya groups in southern Mindanao.	1) T'boli, B'laan, Bagobo, 2) Mandaya	South Mindanao	1) MP, South Mindanao  2) MP, Greater Central
		2) Manuaya		Philippine
Borneo Iban	Warp ikat textiles, including tubeskirts and ceremonial hangings (pua kumbu) made by Iban people in the Upper Kapuas River region of Kalimantan and adjacent regions in Borneo	Iban	Malayic	MP, Malayic
Borneo Benua	Warp ikat textiles, mainly wrap-around skirts made from ulap doyo (local bast fiber) by Benua people in the Kutai region of Kalimantan	Lawangan	Malayic	MP, Barito
Flores Ende	Warp ikat textiles, mainly tubeskirts and men's wraps, made in central Flores in Ende, Ndona and western part of Wolowaru district, including Onelako.	Ende-Lio	CMP	CMP, Bima- Sumba
Flores Lio	Warp ikat textiles, mainly tubeskirts and men's wraps made in central Flores in Nila	Ende-Lio	CMP	CMP, Bima- Sumba

	and areas to the east, Nggela			
	and Wolojita.			
Flores Sikka	Warp ikat textiles, mainly	Sikka	CMP	CMP, Timor,
	tubeskirts and men's wraps			Flores-Lembata
	made in Sikka areas including			
	coastal Sikka Natar styles and			
	inland weaving groups. Two			
	different styles (Sikka Natar			
	and inland Iwang Gete) are			
	sometimes recognised [],			
	though both are made by the			
	same weavers and are not			
	distinguished here.			
Flores Ngada	Warp ikat textiles, mainly	Ngada	CMP	CMP, Bima-
	tubeskirts and men's wraps			Sumba
	made by Ngada peoples in			
	central Flores			
Sumba East	Warp ikat textiles (tubeskirts	Bima	CMP	CMP, Bima-
	and men's ceremonial wraps			Sumba
	called hinggi) made in the			
	eastern part of Sumba.			
Roti	Warp ikat textiles (tubeskirts	Bilba	CMP	CMP, Timor,
	and men's wraps) made on the			Nuclear Timor,
	island of Roti (Rote), near the			West
	western tip of Timor.			
Savu	Warp ikat textiles (tubeskirts	Savu	CMP	CMP, Bima-
	and men's wraps) made on the			Sumba
	island of Savu.			
Lamaholot Ili	Warp ikat textiles (mainly	Lamaholot	CMP	CMP, Timor,
Mandiri	tubeskirts) made in the Ili			Flores-Lembata
	Mandiri region of eastern			
	Flores			
Lamaholot Solor	Warp ikat textiles (mainly	Lamaholot	CMP	CMP, Timor,
	tubeskirts) made on the island			Flores-Lembata
	of Solor (excluding Tanalein			
	and Lewokukung districts)			
Lamaholot	Warp ikat textiles (mainly	Lamaholot	CMP	CMP, Timor,
Lamalera	tubeskirts) made in the village			Flores-Lembata
	of Lamalera in eastern Flores			
Lamaholot	Warp ikat textiles (mainly	Lamaholot	CMP	CMP, Timor,
Atadei (Lerek	tubeskirts) made in the village			Flores-Lembata
Peninsula)	of Atadei in eastern Flores			
Lamaholot Ili Api	Warp ikat textiles (mainly	Lamaholot	CMP	CMP, Timor,
	tubeskirts) made in the Ili Api			Flores-Lembata
	district in eastern Flores			
Alor	Warp ikat textiles (mainly	Alor (several	Timor-Alor-	CMP, Timor,
	tubeskirts) made on the island	Trans-New	Pantar	Flores-Lembata
	of Alor (northwestern, Kalabahi	Guinea		
	area, see BKM91 p214)	languages		
		also spoken		
		nearby)		
Timor Amarasi	Warp ikat textiles (tubeskirts	Amarasi	CMP, Timorese	CMP, Timor,
(excluding Baun	and men's wraps) made by	(similar to Uab		Extra-Ramelaic,
textiles)	Amarasi people at the western	Meto)		West
	end of Timor, inland from			
	Kupang. Excludes types			
	characterised as "Baun"			
Time and Arrest 1	textiles.	11ab 84-4-	CMD Time	CMD Time
Timor Amanatun	Warp ikat textiles (tubeskirts	Uab Meto	CMP, Timorese	CMP, Timor,
	and men's wraps) made in the			Extra-Ramelaic,
	region of western Timor that			West

Timor Amanuban Timor Miomafo	corresponds to the former Amanatun and Nenometan kingdoms [TWTp113], including Oinlasi.  Warp ikat textiles (tubeskirts and men's wraps made in the region of western Timor that corresponds to the former Amanuban kingdom, including Soe and Niki-Niki.  Warp ikat textiles (tubeskirts	Uab Meto Uab Meto	CMP, Timorese	CMP, Timor, Extra-Ramelaic, West
	and men's wraps made in the region of western Timor that corresponds to the former Miomafo kingdom, including Kefamenanu (bordering Biboki kingdom).			Extra-Ramelaic, West
Timor Ambenu (East Timor enclave)	Warp ikat textiles (tubeskirts and men's wraps made in the area of western Timor that is now an enclave of East Timor, corresponding to the former Miomafo kingdom.	Uab Meto	CMP, Timorese	CMP, Timor, Extra-Ramelaic, West
Timor Insana	Warp ikat textiles (tubeskirts and men's wraps made in the region of central Timor (politically West Timor) that corresponds to the former Insana kingdom, including Maubesi and Oelolok.	Uab Meto	CMP, Timorese	CMP, Timor, Extra-Ramelaic, West
Timor Biboki	Warp ikat textiles (tubeskirts and men's wraps made in the region of central Timor (politically West Timor) that corresponds to the former Biboki kingdom.	Uab Meto	CMP, Timorese	CMP, Timor, Extra-Ramelaic, West
Timor Malaka (Belu)	Warp ikat textiles (tubeskirts and men's wraps made in the region of central Timor (politically part of West Timor) that corresponds to the Malaka district of the former Belu kingdom.	Tetun	СМР	CMP, Timor, Extra-Ramelaic, Central
Timor Lautem	Warp ikat textiles (tubeskirts and men's wraps) from Los Palos and nearby districts at the far eastern tip of East Timor.	Fataluku	Timor-Alor- Pantar	Trans-New Guinea, West, East Timor, Fataluku-Oirata
Kisar	Warp ikat textiles (tubeskirts, men's wraps and loincloths) made on the island of Kisar.	1) Kisar 2) Oirata	CMP	CMP, Timor, Extra-Ramelaic, East, Luang- Kisar
Luang	Warp ikat textiles (tubeskirts, men's wraps and loincloths) made on the island of Luang.	Luang	СМР	CMP, Timor, Extra-Ramelaic, East, Luang- Kisar
Babar - Masela	Warp ikat textiles (tubeskirts, men's wraps and loincloths) made on the island of Masela,	Babar-South	CMP	СМР

	part of the Babar archipelago.			
Babar - Wetan	Warp ikat textiles (tubeskirts, men's wraps and loincloths) made on the island of Wetan, part of the Babar archipelago.	Babar-North	CMP	СМР
Tanimbar - Selaru	Warp ikat textiles (tubeskirts, men's wraps and loincloths) made on the island of Selaru, part of the Tanimbar archipelago.	Selaru	СМР	CMP, Southeast Maluku
Tanimbar - Yamdena	Warp ikat textiles (tubeskirts, men's wraps and loincloths) made in the area near the town of Yamdena, on the central island of the Tanimbar archipelago.	Yamdena	СМР	CMP, Southeast Maluku
Tanimbar - Larat	Warp ikat textiles (tubeskirts, men's wraps and loincloths) made on the island of Larat, part of the Tanimbar archipelago.	Fordata	СМР	CMP, Southeast Maluku
Sulawesi Toraja	Warp ikat textiles, mainly tubeskirts and large ceremonial hangings, made in the Kalumpang and Toraja districts of Sulawesi, by Toraja people. These districts may have had distinctive styles, but widespread trade between them makes distinguishing point of origin difficult and they are combined here.	Toraja	Sulawesi	MP, South Sulawesi

Language definitions are from the World Atlas of Language Structures by Dyer et al, and Ethnologue:

Dryer, Matthew S. & Haspelmath, Martin (eds.). 2011. The World Atlas of Language Structures Online. Munich: Max Planck Digital Library. Available online at http://wals.info/Accessed on 2012-07-16.

Lewis, M. Paul (ed.), 2009. Ethnologue: Languages of the World, Sixteenth edition. Dallas, Tex.: SIL International. Online version: http://www.ethnologue.com/

## 2) Definitions of Characters

The column "Character name" lists the characters included in the dataset. The column "Included Motifs" shows which motifs are included in the definition of this character. In some cases one character corresponds to an individual motif, in other cases several variants are listed. These are variations that are similar to the degree that they can be regarded as the same motif, for example angular and rounded forms of the same shape, or variations made by trivial repetitions of the basic shape. For example, ikat weavers will commonly tie a bundle of threads with a design, then separate the bundle after dyeing into two or more sets (either identical or mirror-image versions), producing a repeating design in a similar way that a folded paper-cut will make a repeating design. The motifs (including variant forms) are shown in the supplementary file MotifsS2.

	Character	Included
Character name	number	Motifs
A2	1	A2
BT	2	BT
B2DA	3	B2DA
B2DB	4	B2DB
B2DA-comb	5	B2DA-comb
C1	6	C1
DiF	7	DiF
Drnd	8	Drnd
DB	9	DB and variants
DBT1	10	DBT1
DBT	11	DBT, DBTr1
DBT-HL	12	DBT-HL
DBTr2	13	DBTr2
Gd-c	14	Gd-c
Gd-cd	15	Gd-cd
DBST	16	DBST, Ed-DBST
DBT-TSP	17	DBT-TSP
DBKn	18	DBKn
DB-flor	19	DB-flor
DSdn	20	DSdn
DSF	21	DSF
DDrd	22	DDrd
Ed-SRS	23	Ed-SRS
Ed-ITSN	24	Ed-ITSN
Efr	25	Efr or Mr variation
EiSW	26	EiSW
Er	27	Er, Erd, Erd2
Ern	28	Ern, ErnL
EF	29	EF
Frd	30	Frd
Fi	31	Fi
Gr	32	Gr, Gi
Grd	33	Grd
Grd2	34	Grd2
HT	35	HT, HTP
Hd	36	Hd
Hd2	37	Hd2
HTd	38	HTd
		Hi, Hid (elongated and hooks attached to triangular shapes only,
Hi	39	others classified under Ei and Eid)
Hrd2	40	Hrd2
Hrd2-SFB	41	Hrd2-SFB

110	40	110
H3	42	H3
H3V1-lam	43	H3V1-lam
lr2d	* *	lr2d
IrdF	45	IrdF
ITrFlam	46	ITrF-lam
ITrF	47	ITrF
IrWdashA	48	IrW-dashA
INrd	49	INrd
IrWdblock	50	lrWd-blocks
ITSN	51	ITSN
KJ	52	KJ, KK and combinations
KHdS	53	KHdS, Hrd2-KHdS
HKrdKHdS	54	HKrd-KHdS
KrdF	55	KrdF
KrdFdots	56	KrdF-dots
KrW	57	KrW, KrWd
KrWdots	58	KrW-dots
KrWN	59	KrWN, KrWNd, KrWN2, KrWN2d
KrWdash	60	KrW-dash
KHC	61	KHC
Mrd2	62	Mrd2
Mr2rd	63	Mr2rd
Hrd	64	Hrd, Jrd, Mrd
Hrdext	65	Hrd-ext
Jnrd	66	Jnrd, Mnrd (and variant JnrdV)
Jnrddb	67	Jnrd-dashed band
JnrdIN	68	Jnrd-IN, Mnrd-IN
J	69	J
Jdes	70	 J-des
Di	71	Di
Ei	72	Ei and variations
EiExtd	73	Ei-extdash
Mi	74	Mi
MiDSF	75	Mi-DSF
MiFTH	76	Mi-FTH
Mid	77	Mid, Mird, Mi4rd
Md	78	MdS, MrdS
Min	79	Min, Mind, Minrd (including DSF versions)
Mi2	80	Mi2, Mi2n
MDn	81	MDn, MDnd, MDnrd, MDnd-IN, MDnrd-IN
ZNAG	82	ZNAG
ZBHC	02	ZNAG
ZHhead	83	ZBHC
	83 84	ZBHC ZHhead
ZCR	83 84 85	ZBHC ZHhead ZCR
ZCR ZCRTL	83 84 85 86	ZBHC ZHhead ZCR ZCRTL
ZCR ZCRTL ZCSRT	83 84 85 86 87	ZBHC ZHhead ZCR ZCRTL ZCSRT
ZCR ZCRTL ZCSRT ZEQ	83 84 85 86 87 88	ZBHC ZHhead ZCR ZCRTL ZCSRT ZEQ
ZCR ZCRTL ZCSRT ZEQ ZHEQ	83 84 85 86 87 88 89	ZBHC ZHhead ZCR ZCRTL ZCSRT ZEQ ZHEQ
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZFH	83 84 85 86 87 88 89	ZBHC ZHhead ZCR ZCRTL ZCSRT ZEQ ZHEQ ZFH
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZFH ZFMR	83 84 85 86 87 88 89 90	ZBHC ZHhead ZCR ZCRTL ZCSRT ZEQ ZHEQ ZFH ZFMR
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZFH ZFMR ZKBF	83 84 85 86 87 88 89 90 91	ZBHC ZHhead ZCR ZCRTL ZCSRT ZEQ ZHEQ ZFH ZFMR ZKBF
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZKBF ZTF	83 84 85 86 87 88 89 90 91 92 93	ZBHC ZHhead ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZKBF ZTF
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZKBF ZTF ZSTG	83 84 85 86 87 88 89 90 91 92 93	ZBHC
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZKBF ZTF ZSTG ZHG	83 84 85 86 87 88 89 90 91 92 93 94	ZBHC ZHhead ZCR ZCRTL ZCSRT ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZFMR ZKBF ZTF ZSTG ZHG
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZKBF ZTF ZSTG ZHG ZHPT	83 84 85 86 87 88 89 90 91 92 93 94 95	ZBHC ZHhead ZCR ZCRTL ZCSRT ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZFMR ZKBF ZTF ZSTG ZHG ZHG ZHG ZHG
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZKBF ZTF ZSTG ZHG ZHPT ZHSTP	83 84 85 86 87 88 89 90 91 92 93 94 95 96	ZBHC ZHhead ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZFMR ZKBF ZTF ZSTG ZHG ZHG ZHG ZHG ZHG ZHG
ZCR ZCRTL ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZKBF ZTF ZSTG ZHG ZHPT	83 84 85 86 87 88 89 90 91 92 93 94 95	ZBHC ZHhead ZCR ZCRTL ZCSRT ZCSRT ZEQ ZHEQ ZHEQ ZFH ZFMR ZFMR ZKBF ZTF ZSTG ZHG ZHG ZHG ZHG

rhomb	100	rhomb
pan	101	pan
i-des	102	i-des
asymTS	103	asymTS
STA	104	STA
STB	105	STB
STC	106	STC
SSA	107	SSA
SSB	108	SSB
CBR	109	CBR
SBL	110	SBL